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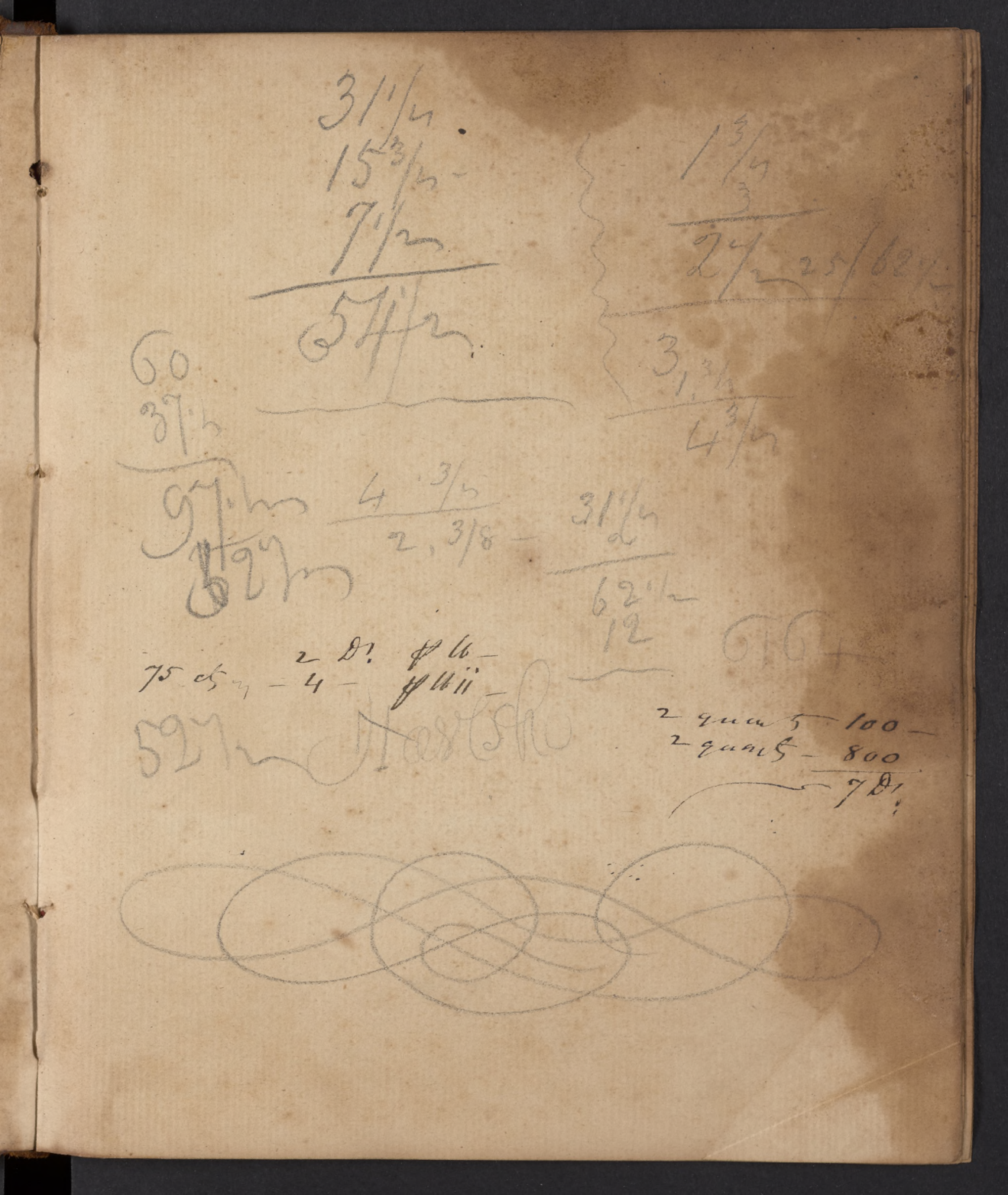


Injuries of the Scalp

When contusions are received from blows by an obtuse body, the part feels soft and pappy, the surrounding edges are hard, and the accident appears to an inexperienced Surgeon as if the cranium was fractured and pressed upon the brain. A young Surgeon would be inclined to make an incision through the contused part and lay bare the cranium. This however Shd never be done unless symptoms of compressed brain exist, as the patient would suffer unnecessarily the pain of an operation, perhaps exfoliation of the bone opposite the contused part, a long confinement to bed and a tedious suppurating sore — For these reasons there an incision Shd never be made in the Scalp unless Symptoms of compressed brain are present

Endeavour to prevent inflammation of the brain by V.S. low diet and the application of cold water to the Head — The Scalp is liable to all the different wounds —

Injuries of the Scalp

When the wounds are incised they are to be treated as incised wounds of other parts &c &c &c

Sometimes the Scalp is much torn from the parts it covers — Dr P. has seen it torn from the forehead to the occiput in the direction of the Sagittal suture. The Scalp is sometimes torn from the haricital bones, falls down and covers the ~~head~~ ear on the side of the face

It was formerly advised by the older surgeons to cut away the whole portion of the Scalp so torn as they thought it would produce exfoliation of the bone &c. Their intention was also to prevent a confinement of matter. This practice is very absurd. You are to clean the Scalp of dust hair and other extraneous matter, by means of a sponge and warm water, replace it in its proper situation and keep it so by means of sutures and adhesive plaister. When sutures are used they ~~shd~~ must not be close in contact as they will produce inflammation, delirium and other alarming symptoms. I have known the circulation to be interrupted and sloughing produced. The sutures ~~shd~~ should be approximated ½ of an inch and the knots ~~shd~~ not be firmly tied —

thd. not be firmly tied, but thd. be slip or bow knots so that if tention thd come on it would be easy to loose the knots.

If an abcess thd occur open it in the usual way. If exfoliation of bone expose it by an incision and extract the loose pieces through it. When inflammation occurs after wounds particularly the punctured it spreads like erysipelas all over the face arm &c. Fever and sometimes delirium ensue. When it occurs from a punctured wound, dilatation will immediately subdue the symptoms; if this fail the antiphlogistic plan thd be pursued and if this will not succeed, ablution thd be applied over the inflamed part of the scalp. When the suppurative expansion is effected Dr P. has known it to slough off before it was cured.

It is at times difficult to ascertain whether the delirium arise from inflammation within or without the cranium or whether from disease exterior to the bone or suppuration inside. This is easily determined by observing the state of the exterior disease, for if large it is quite sufficient to produce delirium which counter action will prevent the surgeon from having recourse to perforating the bone. The second disease from contusions and contused wounds of the scalp is formidable

on account of the extreme pain and distress occasions and from its very long continuance.

The part receiving the injury is affected with very great pain. A case of this kind came under my care (D. D. P.) in a lady who rec'd a blow from a window falling on her head — On shaving off the hair there was no swelling and not the least appearance of disease. An incision was advised to which the patient consented —

A crucial incision was made on the painful part which gave immediate relief.

Nothing is so effectual —

A lady who fell from a sofa received a blow on her head which occasioned a continual distressing pain. — Bark opium, arsenic Blisters, low diet, mercury and purging were tried without effect — The crucial incision was performed and relieved her for one month — Her pains then returned — The wound was kept open by applying lint between the edges and by cauthenide — The portion of scalp on which she fell was dethroned by caustic but without effect — At length she was advised to go into the country whence she returned perfectly cured —

Dr P. has performed the operation in one case without benefit. A man who by falling from a scaffold had received a contused wound of the scalp, was affected with pain

with pain to such a degree that he could bear no one to walk across the room

Dr Physick made a crucial incision an inch and a half long which at that moment relieved him, but in a few minutes the pain returned on the opposite part of the head. after waiting 2 days and finding the pain continue I advised an incision there also — It was done and the patient was perfectly cured —

An incision thro' the painful part of the scalp is the most successful treatment — If that fail a journey to the country — In time the pain will cease.

A sea voyage removed the pain but the patient was at sea but it returned on landing.

The next accident produced by contused wounds is

Compression of the brain —

The symptoms are Stupor Drowsiness, loss of sense and voluntary motion, Stertorous respiration sickness at the stomach, vomiting and homorrhage from the ears and nose — It may arise from two causes

1. From a fracture of the cranium depressed below its natural level and pressing on the Dura Mater

the Dura Mater and Brain ——

2. It may be occasioned by an effusion of blood from the ruptured vessels in the violence done to the head ——

It then occurs between the cranium and Dura Mater or between the Dura and Pia Mater in the substance or in the ventricles of the brain — when these affections occur from effusions of blood from ruptured vessels, these symptoms seldom directly occur ——

These two causes are often combined.

A boy received a wound in the forehead. On examining the wound I found the bone fractured — and not only so but actually driven in and pressing upon the Dura Mater. He was able to sit in a chair and tell us that he received the blow from a stone being thrown across the street. Immediately after he had finished his relation he fell and was seized with the symptoms of compressed brain viz — Stertorous respiration, loss of sense voluntary motion &c — Ten minutes had elapsed from the time he received the injury till these symptoms came on —

Now it could not have arisen from the depression of bone, it must have been caused by the effusion

4 Fractures of the cranium distant from the longitudinal sinus are in some instances unattended by Symptoms of compression [redacted] this explination is unsatisfactory

F.H

by the effusion of blood from vessels ruptured at the moment of the accident. The blood being poured out slowly produced this interval.

The cranium is sometimes fractured and the bone depressed while no symptoms of compressed brain exist. Once saw the frontal bone so pressed that it was easy to lay the finger in the depression and yet there was an absence of these symptoms.

It is with difficulty accounted for, and the difficulty can be solved only in one way and that is by supposing the bone to be broken opposite to the longitudinal sinus, for had it pressed on the Dura Mater these symptoms must have been produced.

The third species of injury attending wounds or contusions of the scalp is Inflammation of the Brain or its Membranes.

It may be distinguished from compression by never coming on directly after the injury. Eight or ten days elapse before the symptoms appear and in one case they did not occur until the 8th week.

Symptoms - restlessness, want of sleep, a frequent hard pulse, rigors, delirium, coma and convulsions. It may be carried by simple

by simple contusion of the scalp or where there is a simple fracture or a fracture unattended with depression of bone —

When inflammation of the brain is about to come on in consequence of a wound of the scalp, the hair which has received the contusion becomes tumefied, soft and pappy as if there was a fluid beneath and when an incision is made down to the bone, so as to lay it bare, the denuded cranium will be found changed to a white colour.

However well the appearance may be in contused wounds of the scalp, the wound ceases to look well as soon as inflammation of the brain occurs, the granulations become flabby and instead of healthy pus, discharge a thin serous fluid and the pericranium seperates from the cranium —

In contusions of the scalp however slight they may be warn the patient against inflammation within the cranium and forbid exercise and confine him to a low diet &c

If he complain of pain bleed, purge and apply a blister to the part — If this do not succeed pain and convulsions will ensue; To prevent or rather to remove these it becomes necessary to perforate the bone with a trephine.

In doing this you will find but on the Dura mater and if the wholes of the lens be exterior it is a fortunate circumstance

But it is sometimes between Dura and Pia mater — such cases almost always terminate fatally — when contusions produce suppuration between the Dura and Pia Mater the first effect of the blow is to injure not only the scalp but the membranes and substance of the Brain — Dr Physick differs from Mr Pott on this subject

Mr Pott supposes that the inflammation of the brain in these cases is owing to an anastomosis of vessels between the scalp and the membranes of the brain

When from the symptoms of compression brain do you think there is matter on the surface of the brain perforation of the bone becomes necessary in order to raise up the depressed portion of bone, let out the effused blood — or if there be suppuration to permit the pus to escape, as it may otherwise make its way into the brain

Contusions are sometimes followed by symptoms of compression when there is no mark to shew the injured spot. What in this case

this case been advised to perforate the bone by conjecture — I would much rather depend on other means such as the applications of Ice or cloths ring out of cold water &c. keeping the patient still and quiet thus endeavouring to diminish the hemorrhage from the ruptured vessels —

Instrument — A strong scalpel, two trephines — an elevator — a tooth pick and Mr Hey's saw — First shave the hair from the head — this may be done by a strong scalpel — then make the incision and with that portion of the scalpel which projects beyond the handle, you are to scrape the Pericranium — A raspatory was formerly used but the projecting end of a scalpel is preferable — A perforator was formerly used to fix the central pin of the trephine, but if the trephine be properly made the perforator is useless —

The next instrument is a Trephine with a circular saw having the central pin moveable — The stem in which the central pin moves is made hollow and allows the pin to be drawn up to any height or to be pushed beyond the teeth of the saw —

Two trephines of exactly the same size should be

at hand that one may be cleaned while the other is used. When the groove is found you may may move your central pin and retract it as soon as it gets a little deeper for fear of wounding the Dura Mater.

The Elevator which is a simple lever is the next instrument wanted.

A pair of forceps to pull out pieces of bone which some Surgeons use is of no service as The lenticular which has been employed to take off the sharp edges of bone is as useless for the elevator will answer the purpose.

A tooth pick is necessary to ascertain as you proceed the depth of the perforation.

Operation — First expose the bone to ascertain the nature of the fracture in There is sometimes a wound, but when there is none or a very small one an incision shd be made through the scalp down to the bone — when a fracture exists great caution is necessary in making this incision, for if much force be used the knife may go down through the pericranium to the Dura Mater — After you have denuded the bone the pin of the trephine is to be projected beyond the saw and screwed in that situation.

It should always be placed on a bolder piece of bone — never on a depressed pavement but as near to it as it can be fixed with safety. — As soon as you have made a grooved deck enough to confine the saw in one place retract the pin. You should often examine with the tooth pick the groove made by the saw so that you may ascertain when the saw has perforated the cranium — Without this precaution there is danger of puncturing the Dura mater — You should never saw through the internal table of the skull but just so as to get at it, for it yields easily to the elevator — The pieces of bone should be removed by the elevator —

~~The Skull should then be raised to its natural level~~

There is sometimes an effusion of blood or pus between the Dura & Pia mater — in this case a perforation with a lancet should be made by some Surgeons directed through the Dura mater — is to be

This is highly dangerous — all the cases of this kind which D.P. has seen have proved fatal by inflammation and suppuration —

We have known recoveries from punctures of the Dura mater by accident and it appears strange that art should be unsuccessful —

We know when the Dura Mater is injured by its upper surface being of a darker colour than natural, by its feeling very tender instead

of soft and flabby, by its bulging a convex
instead of a plane surface and by the absence
of its usual alternate rising and falling —
~~During~~ health it rises during expiration
and falls with inspiration —

It is often proper to delay the perforation
for abscess has in some instances been
produced by V.S. and cold applications &c

~~Mr Hey~~

Dressing of the Wound

It is very customary to apply dry lint over the Dura Mater and Pericranium: it is certainly very light but it has one inconvenience, the blood glews the lint to the wound and renders it difficult to be removed whenever it may be necessary to examine the Dura Mater.

A soft bread and milk poultice is a better dressing — It was customary to leave the edges of the divided scalp open, but lately it has been the practice to draw the edges together by sutures as when the bone is uninjured ——

By this way much suffering is prevented and the cure is sooner effected ——

Dr P. has often used this method after the operation of trepanning and has been pleased with the result ——

When the scalp is open there is danger of an exfoliation of the denuded cranium, granulations arise and must have time to cicatrise which renders it a tedious business ——

There are inconveniences however in drawing the edges close for it is impossible to see the Dura Mater — taken after the operation of the trepanning and the elevation of all the

all the depressed portions we find the Dura Mater sound, the patient free from symptoms of compression and the Dura Mater in a natural state, it is proper to draw the edge of the divided scalp together, either by sutures or by adhesive plaister which is better —

If sutures be used they shd be tied with slip or bow knot & when blood exists under the Dura Mater or when the evacuation of blood continues the edges of the scalp shd never be drawn over the perforated bone, but a wide opening should be left for the evacuation of matter — —

After the operation it is necessary to pay great attention to the patient as inflammation of the Brain sometimes comes on —

He should be confined to a dark chamber — perfect rest and very low diet should be strictly enjoined — Should fever come on the most copious bleeding shd be used — Nothing requires the use of the lancet to a greater extent &c

Dr P. has bled 4 or 5 times in one day — when there is an effusion under the Dura Mater viz. is particularly necessary —

A boy who from a fracture had a depression of the bone was completely recovered by the operation: from a state of insensibility he was restored

to his perfect senses and continued so for more than two months; after this time febrile symptoms occurred, pain, delirium a tense hard pulse. The Dura Mater was elevated into a conical form at the bottom of the perforation, so much so that the upper and middle surface of that membrane was on a level with the external table of the skull. It has somewhat the appearance of a vesicle produced by cantharides.

From these symptoms Doctor Physick supposed that inflammation of the brain had taken place and by the remedies just mentioned the swelling was reduced, the surface of the Dura Mater at the bottom of the perforation receded to a plane, and the boy recovered.

This case is related by Doctor Physick with a view of cautioning young surgeons against letting out the effused fluid.

A blister over the head is an excellent remedy.

Doctor Physick mentioned that violence was sometimes done to the head and the functions of the brain disordered where there was no mark to guide us in the application of the trephine. These are called Concussions.

Concussions

V.S. Cathartics and a blister to the head shd. be used — Bell advises the use of stimulating applications, this is a pernicious practice. The use of wine volatile alkali and opium as he recommends must increase the effusion —

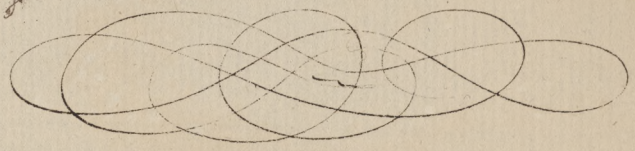
There are several places where the ancients deemed it improper to apply the trephine as over the sutures, the temporal and occipital bones and frontal sinuses; but whenever the operation is necessary there is no reason for having any regard to the place — Dr P. has operated on all parts —

Their reasons for not applying the trephine over the sutures were that the Dura mater adhered more firmly to the bone in that place — there were more vessels passing to and from the bone and they feared inflammation — There was also a large sinus and they were afraid of opening large bloodvessels — Dr Physick has operated over the longitudinal sinus and the hemorrhage was easily stopped by a dossil of lint —

They avoided operating on the temporal bone because the temporal muscle lay there and they

and they expected if that was wounded locked jaw would ensue — Dr. Pilcher laid bare the squamous portion of the temporal bone and the patient was in consequence unable to open his mouth, but this was very different from locked jaw and it went off in a few days — It was surely the inflamed state of the muscle which prevented its elongation and it went off without any application.

They would not operate on the occipital bone because it was so uneven and for the same reason that they were afraid of the longitudinal sinus —



Diseases of the Eyes

and 1st of Inflammation of them

This may take place in the eyelids either wholly or partly, in the tunica conjunctiva in the cornea or in the globe of the eye, in the anterior or posterior chamber.

Inflammation of the Eyelids sometimes causes an extravasation of serum into the cellular texture swelling the lid very much so that the patient cannot open them. The skin becomes of a scarlet colour. This frequently comes on in the night and the patient supposes it to proceed from the bite of an insect. It is however not easy to ascertain what is the cause unless when it arises from mechanical violence.

Treatment. In general if there be much inflammation V.S. should be used. This with the exhibition of a mercurial purge and low diet will generally remove it. If this be not sufficient the application of camphor and

brandy

and brandy may be tried—

The best method of applying these remedies is to dip rags in the brandy, ring them out and lay them on the eyes. The discharge of fluid in most cases of inflammation of the eyelids is but small. Sometimes the edge of the eye lid becomes excoriated and discharges a vitiated purulent fluid agglutinating them so that the patient is obliged to wash them in the morning before they can be opened.

The general opinion is that this is an ulceration of the glands of Meibomius. Dr. P. believes that it is an ulceration seated at the root of the hairs resembling in this respect Tinea Capitis.

A proof of the correctness of this opinion is that the disease has been cured by drawing out the hairs.

Spermaceti has been used for this affection with advantage. A wash of a solution of lunar caustic has been advised, taking care to wash the eye lids afterwards to prevent the solution from getting into the eye—

The most common remedy is a solution of Sac. Saturni or the Unguentum Citrinum. I have found the Mag. Pice applied between the edge & the best remedy — when this fails drawing out the hairs will perhaps prove effectual —

A girl about ten years of age was cured by the abovementioned ointment in about 2 weeks after having been afflicted with inflammation and ulceration of the eyelids for 9 years.

When the tunica conjunctiva inflames it becomes red owing to an increased size and action of its vessels which were before pellucid but now admitted red blood. The eye waters exceedingly, the patient cannot bear the action of the light and the pain is of a burning kind, casting a sensation resembling that produced by some extraneous substance. In some instances the pain is not confined to the eye but affects the forehead —

Sometimes the inflammation consists in a pimple or ~~Speck~~ Speck. This may be situated either on the tunica adnata or cornea but is most commonly situated near the edge of the cornea and intercepts the light. Inflammation of the tunica conjunctiva often spreads over the whole cornea throwing out coagulable lymph. This if not soon cured leaves a film behind it which obstructs the sight of the patient.

The pimple above mentioned if it be not soon cured leaves an opaque speck behind it. Inflammation of the cornea of the eye causes an extravasation of coagulable lymph which occasions the disease called Hypopis.

The injuries done to the eye which occasion inflammation are

1st. Those occasioned by mechanical violence as wounds, Sand getting into the eye, Trichiasis &c.

2. The application of acrid substances to the eyes these often occasion blindness as lime, ashes smoke &c.

3d Too strong light
4th Too much exercise of the eyes in viewing small objects
5th Cold 6th Intoxication
7th The small pox, venereal disease &c &c

Inflammation often occurs without our being able to assign any cause for it.

Inflammation of the eyes is sometimes occationed by the matter of gonorrhoea being applied to them. This is a rare occurence but when the inflammation proceeds from this caute it is of uncommon violence

Of Inflammation seated in the more internal part of the eye. This may occur either before the chrystaline lens or behind the lens. It is attended with great sensibility pain and fever.

when it affects the anterior chamber only it is not attended with much pain.

when however it occurs in the posterior chamber it is attended with violent pain and in general if it be not soon removed the sight is lost. The first

cate

The first case of this kind Dr P. ever saw terminated in death —

The treatment consists in removing all mechanical violence and avoiding the remote causes. If it be produced by some extraneous matter getting into the eye as a speck of sand lodging between the lid and the globe it must be wiped off. This may generally be done by passing between the lid and the Eye a probe having a piece of soft rag wrapped round it —

If it still remain we may invert the eyelid and remove the sand. If the extraneous matter stick in the cornea it will not be easily seen as the Eye will roll about incessantly and cannot be held still by the patient. A Speculum or the handle of a pair of scissors will enable us to hold the eye still so that we can examine it and remove the offending object with the point of a lancet —

In trichiasis the inflammation proceeds from the eyelashes being turned inward. When this occurs pulling out the hairs will produce a cure —

The tarsus itself is sometimes turned in —
It may be turned out and divided or
a piece of the skin of the eyelid cut out
taking care not to divide the conjunctiva
and the divided edges brought into contact
and kept so by the interrupted suture —

We can generally cure inflammation by
V.S. which should be regulated by the degree
of the inflammation and the violence
of the fever. When the patient has lost
considerable quantity of blood from the
arm he will be able to bear cupping
and leeching. If it still continue
scarification of the vessels of the conjunctiva
should be tried — Purging & the antimonials are found very useful — So
also are applications to the eye —

The mildest remedies should be
tried first and of these perhaps the
juice of Satsapat is the best. Sometimes
a bread and milk poultice answers
very well but it frequently too heavy.

A crumb of bread boiled and put
into a gauze bag then dipped in rose
water and applied to the eye is very useful.

If this should not succeed we may try the following collyrium

℞. Sac. Sat. gr. v
Vitriol. alb. gr. iii
Tinct. Theb. ℥ß
Aquæ . . . . ℥iv. . .

Astringents however should not be employed too soon — They do injury unless they have been preceded by the proper evacuations — In such cases Dr. P. thinks that the addition of ℥ii of vinegar greatly improves the remedy. When the inflammation has gone on to suppuration and matter has accumulated under the cornea it should be immediately removed by an incision made in the same manner as in operating for cataract; instead of allowing it to open by the natural process of ulceration which would render the cornea opaque — When the above remedies fail of removing the Inflammation mercury employed so as to excite a salivation combined with a vegetable diet often proves useful —

Two circumstances are of the highest importance in the treatment of inflammation of the eyes 1st confining the patient to a dark room and to a diet strictly vegetable. A seaton in the neck may serve to decrease the inflammation

Unguis This sometimes gradually grows over the cornea so as entirely to destroy vision The only remedy is to dissect off the membrane with a pair of scissars and forceps except that part that adheres to the cornea. This should be carefully dissected off with a very sharp knife

Inflammation sometimes occasions an opacity of the cornea which almost always remains but which sometimes goes off voluntarily if left to itself

Mistaken notions of the cause and nature of this have led practicians into a very erroneous practice Molasses has been dropped into the eye and finely powdered glass has been used in order to wear it off. These however only serve to render it worse. If any part of the cornea remain transparent an operation may

may possibly restore vision by making an artificial pubil. Dr. P. once saw a case in which the patient had wasted his eyes with his urine while labouring under gonorrhoea. Inflammation supervened and the cornea became opaque. The patient applied to Dr. P. for the restoration of his sight and by his anxious request the Dr consented to operate on his eye tho' with little hope of success. He passed a knife through the cornea and cut off a piece of the Iris in the Eye was then closed and the patient put to bed. He can now see to read if the print be large. Dr. P. had never seen such an operation before. When the eyes are violently inflamed it is difficult to remove the inflamation. Dr. P. once had a case of this kind. The patient laboured under great pain. V.S. low diet, purgings and salivation had been employed without success. Cupping and scarifications were likewise useless. He was cured by

Tar water

by tar water alone — The eyes were washed with it and rags wet with it were applied to the eye lids —

Fistula lachrymalis —

In order to cure this disease it is absolutely necessary to understand the anatomy of the parts concerned —

The tears secreted by the lachrymal glands after having served to lubricate the eyes are taken up by the puncta lachrymalia and carried to the lachrymal sac — Thence they are conveyed to the nose through the nasal duct which opens under the inferior turbinated bone —

These ducts in common with others are liable to structures. When they are by any means stopped the tears accumulate in the lachrymal sac which becomes swollen. If we press upon the swelling the tears will regurgitate and if the pressure be continued they

will be followed by a viscid matter resembling mucus which is probably secreted by the inner surface of the sac.

Sometime some of the tears may be forced by pressure down into the nose. If the eye lids stick together they may be washed and a piece of soft dressing applied between them.

The pressure upon the sac should be made permanent so as to keep it empty. If this be done the structure will often subside spontaneously.

Not unfrequently however the inside of the sac inflames. This inflammation is communicated to the skin and the puncta are stopped up. This is accompanied by burning inflammation of the part and fever. Generally however an opening is formed and then the pain and inflammation subside. When the sac suppurates and there is no opening formed the Surgeon should make an incision into it

and try to keep a probe into the nose.

If this can be done easily he may keep a bougie into the nose daily and after the structure is removed completely this may be discontinued.

This simple method often cures the disease.

When the ductus ad nasum is entirely impervious it becomes necessary to make an artificial opening — This should be done through the os unguis that being the only bone between the sac and the nose —

The instrument recommended by Mr Pott for performing this operation is a common trochar. The hole however which is made by this instrument is very apt to close up the fragments of the bone uniting again and the operation being thus rendered useless Mr Hunter has invented a method

of performing it in such a manner as to prevent this remiond. It is done by introducing a piece of horn into the nostril for the instrument to press against and then by means of a punch completely removing a circular piece of the bone. When the operation is performed in this manner there is no necessity for introducing a piece of bougie through the opening as in the other case for when a piece is cut out the aperture will continue open and the external orifice may be closed immediately by covering it with a piece of leather spread with adhesive plaister.

When the bone is carious and there is a fungous excrescence cut out the bone and treat the fungus as if it were seated in any other part. The caries however is not easily stopped.

The operation

There is generally an opening into the sac and through this the probe may be passed into the sac and thence into the nose. But when there is no opening and the sac has begun to suppurate it is necessary to make one by incision. There is always a tumour formed by the protruding sac which will direct the operator where to make the incision. Care must however be taken to make it below the junction of the palpebræ

Then pass a probe through the sac and into the duct and push it on with force enough to overcome the structure...

A bougie must be introduced and worn as long as possible. The patient will wear it perhaps a whole night or day —

To avoid the inconvenience of wearing a bougie M^r Ware has invented a small probe with a button at the end of it — The button may be blacked with black sealing wax and thus made to resemble a piece of court plaister

The probe should be worn several months and once a fortnight it should be taken out and cleaned.

Sometimes the structure cannot be removed in this manner — the probe cannot be pushed into the nose and the duct is impervious and perhaps completely obliterated by an enlargement of the bone.

In this case an artificial opening must be made to supply the place of the natural one. This should be done in the manner described by M^r^ Hunter —

Introduce the horn into the nose and press the punch against it taking care not to push it against the nasal process of the Superiour Maxillary Bone —

A probe can easily pass through the orifice thus made into the nose and the external wound may be united immediately —

The disease seldom occurs in very young people — most commonly affects persons of about 40 years of age —
But Dr C. has seen it in an infant —

This dissection takes place most frequently when the ~~cataract~~ capsule of the lens is opaque and oftener in women than in men —

Cataract.

A cataract consists in an opacity of the chrystaline lens or its capsule.

It appears like a white speck which seems to fill up the pupil.

It commences with a dimness of vision and the appearance of something like gauze before the eye. The patient is often troubled with the appearance of specks or bars before the disease is visible externally. It is generally caused by mechanical means.

In the cure many remedies have been used and of these mercury is the principal but none of them have been found effectual. When the disease proceeds from external violence it will sometime disperse spontaneously. The powers of nature are considerable in promoting this dispersion which is done by the process of absorbtion.

Medicine being unavailing it becomes therefore necessary to operate and thus remove the disease.

This may be done in two ways viz
Couching and Extracting —

The former is a very ancient operation and has long been known in the Surgical world. It is done by inserting a needle into the eye about 1/10 of an inch behind the transparent cornea continuing it into the opaque chrystaline lens and elevating the handle and depressing the point in order to press the lens to the bottom of the eye —

Extraction is an operation of later date than couching. It is done by making an incision into the cornea through which the chrystaline lens is to be extracted.

This is the operation which is most generally practiced —

There are several reasons for preferring the operation of extracting to that of couching cataract.

1st Extracting is less painful than couching. Some time ago I extracted a cataract from a man who had been couched about two years

two years before. after the operation was over he would scarcely believe that it was done and declared that it gave him infinitely less pain than the former operation — Dr. P. has frequently after operating on one eye been asked by the patient to extract the cataract from the other eye immediately. This seems a pain pain however is not intended and the operation sometimes gives considerable pain.

2? The cataract never returns after having been extracted, but when it is couched it often rises and gets behind the pupil again and then it is necessary to repeat the operation — in some instances it has been repeated 5 or 6 times —

The cataract is said to be absorbed after being depressed and this is often the case but there are many instances in which it is not absorbed —

3? When the cataract is fluid it may be evacuated by the incision in extracting but cannot be depressed by couching —

The opacity in this case however is not before the pupil and of course will not impede vision —

When the capsule is opaque it may be pulled out but cannot be depressed or

In extracting it may be pulled out with a pair of forceps. But in couching tho' it be lacerated it cannot be depressed because of the adhesions round it or if it be for an instant depressed it will rise up immediately in

5th when adhesions exist between the Iris and the capsule of the lens they may be separated by extracting; but the lens in this case cannot be depressed without pulling down the Iris. Dr P. has seen the Iris torn from its situation in an attempt to depress the cataract.

The inconveniences attributed to the operation of extracting the cataract

It has been said that it always leaves an opaque cicatrization which prevents vision. If the operation be performed with a sharp knife and all in one cut this objection does not hold good. But if it be done with a dull knife or if any part of the incision be made with a pair of scissors it will certainly produce this inconvenience

It is said that if the cataract be hard and firm it tears the pupil and distigures the corneal rendering the pupil oval instead of round. This sometimes take place but the patient can see as well through an oblong pupil as through a round one.

It is also said that the iris is apt to be wounded in extracting. Sometimes if the operator be careless this may be done and part of it may even be cut out.

But this may be avoided very easily. If the iris be seen floating in the way rub the cornea with the finger it will immediately contract.

It is said also that the vitreous humour is often forced out; but this never happens except when very unnecessary pressure is made upon the eye.

For the reasons mentioned Dr P. prefers extracting. In very young subjects however who are unable to hold their eyes sufficiently steady the Dr would couch.

Before attempting the operation of couching it is proper to ascertain whether or not there be reasonable grounds for supposing that it will be successful. Sometimes

Circumstances

The Surgeon should not be deceived on examining the eye — this may happen from opaque spots on the cornea and a false color reflection of light from the eye. He may avoid being deceived by the former by looking at the eye sideways, the pupil will be seen below the spots —

Sometimes circumstances preclude it entirely. In order that we may hope for a favourable termination —

1st The eye should be in other respects in a healthy state —

2d The eye lid should not be swollen —

3. There should be no pain in the head as this would be increased by the operation and therefore it sh? be previously removed by low diet and purging.

4th. The pupil should contract freely in a strong light and dilate in the dark —

This however is not a certain sign of the sound state of the retina — Dr. P. once extracted a cataract from the eye of a patient whose pupil contracted and dilated freely. The cataract was firm and hard but the patient could see nothing after its removal. after extracting the cataract from the other eye the was able to see objects with it —

On the other hand I have successfully operated where the pupil did not appear sensible to the influence of light —

Here however there was an adhesion between the Iris and the capsule of the lens —

Before undertaking the operation it is proper to know whether the patient have a cough or whether he be apt to sneeze violently. Violent sneezing has in some cases ruptured the vessels of the eye and thus occasion an extravasation of blood into it and in one instance suppuration ensued and the patient lost his ~~eye~~ sight.

Old people are very apt to sneeze violently. Dr P. has often found his patients relieved from a fit of sneezing by pressing pretty firmly against the upper lip.

The patient should be confined to a low diet and take purges for some days previous to the operation. If however he be weak depletion is unnecessary and if plethoric ~~VS~~ V.S. may be used. . . .

Either the Spring or the fall are the proper seasons neither very cold nor very warm weather being favourable. . . .

In cold weather it is difficult to keep the apartment in which the patient remains of an uniform temperature. He therefore is liable to catarrh which produces violent inflammation. In very warm weather the patient cannot lie perfectly still so as to permit the wound to heal soon.

After determining to extract it is proper to select the instrument — There are —

1st A speculum oculi which is commonly employed to steady the eye. This presses upon the ball of the eye and in this manner tends to make it steady but it sometimes irritates it and in this way tend to make it move — Besides this it entirely occupies one hand and it is often necessary with that hand to rub the cornea in order to disengage the iris from the knife —

It might in this case be held with three fingers and the eye rubbed with the remaining one by a surgeon who was afraid to do without it —

2d The most important instrument is the knife — The diameter of this at the broadest part is a little greater than the semidiameter of the cornea —

It grows gradually broader from beginning to end and the lower side has an extremely sharp edge throughout its whole length. The upper one has an edge as far as 1/8 part of inch from the point and this in order to give it a very fine point and an easy entrance — By growing continually broader it prevents the aqueous humour from

pour flowing out —

3d The next instrument is a needle which is flattened into a handle and is a little curved. This is employed for rupturing the capsule of the chrystaline lens.

At the other extremity of the handle is a kind of scoop for the same purpose of extracting any pagments of the lens that may remain.

4th A pair of forceps. In selecting these it is necessary to choose such as do not touch at their extremities merely by two points but by as large a basis as possible —

They resemble the common dissecting forceps except that the extremities are elongated as it were and smaller. . .

5th A small hook fixed in a handle. If the lens should fall down upon the capsule being ruptured this will serve to raise it up and draw it out, indeed I have frequently extracted cataract with this alone —

6th. It is convenient to have a pair of very sharp and short pointed scissars to finish the incision if it be not sufficiently large —

The day before the operation the patient should take a cathartic —

Before performing the operation the eye should be covered with two compresses which should be attached by a bandage passing over the forehead, pinning up that which is over the eye to be operated on. . . .

Seat the patient on a low chair opposite to a good light, his face being turned obliquely towards it. If he were directly facing the light it would be reflected. The surgeon should sit higher than the patient and before him.

Some surgeons choose to have a stool to raise their knee that they may thus form a rest for their elbow.

An assistant should stand behind the patient and elevate his eyelid putting the ends of his fingers under the edges of the lid and making moderate pressure upon the eyeball. If it be the left eye of the patient upon which the operation is to be performed the surgeon should hold the knife in his right hand and vice versa. If the surgeon cannot operate with his left hand the knife must be formed in such a manner as to pass over the nose allowing for its projection

A dexterity of using either hand should be acquired by operating upon dead subjects.

The Surgeon should hold the knife very much as he does his pen in writing —

When the eye is first opened it moves in a variety of directions but after a little while it becomes perfectly still —

As soon as this is the case apply the point of the knife about the twelfth part of an inch from the Sclerotica —

but do not then puncture the cornea because the eye moves when the knife first comes in contact with it. when it has become fixed make the puncture and push the knife until it comes out at the opposite edge of the cornea and completes a semicircular incision. If after making the puncture the iris be seen floating in the way rub the eye with the finger. After the knife has punctured the side opposite to that at which it entered it has a complete command over the eye — Care must be taken not to draw the knife backwards as it is necessary to finish the incision with one push — Then lacerate the capsule of the chrystaline lens and press upon the eye in order to force it out. . .

As soon as the section of the cornea is completed the eye lids should be closed in order to permit the pupil to dilate — after waiting a few minute the needle may be introduced for the purpose of tearing the capsule of the lens — a gentle pressure will then generally discharge the lens — The divided portions of the cornea shd. be liberated with the scoop —

If the lens shd. not be easily extracted in this manner the Surgeon take hold of it with the hook — The moment it is out the eye lids shd. be closed for some time —

~~If~~ They are afterwards opened and the pupil examined — If the capsule be not opaque the patient sees. If opaque the pupil remains white. The Surgeon next should proceed to extract the fragments of the capsule. They are often brought into the anterior chamber of the eye and discharged by gently rubbing the lid over the cornea — but if they remain in the eye the scoop should be employed. This shd. not be pushed too far for fear of injuring the capsule of the vitreous humour —

If the capsule of the lens

After cutting the cornea the eye should be suffered to rest a little and closed —

Baron Wendrel had acquired such dexterity in performing this operation that when the point of the knife was opposite to the pupil he pushed it backwards, punctured the capsule of the lens and then continued the incision — If after extracting there be any opaque parts remaining they are probably fragments of the lens or of its capsule and sh^d be extracted with the forceps or scoop.

The patient eye should then be covered with the compresses and bandage put to bed where he must be kept for at least 8 or 10 days in a darkened apartment —

The patient should be cautioned against rubbing his eye and to prevent this from being done ~~D^r P.~~ involuntarily D^r P. fastens the patients hands by tapes in such a manner that they are allowed to go no higher than his chin — Pressure would force out the vitreous humour and thus entirely bereave the patient of the power of seeing —

If the capsule of the lens is to be taken out a small pair of forceps is the best instrument. — Sometimes the lens cannot be extracted by any moderate degree of pressure tho' aided by the hook. It is then probable that its capsule adheres to the iris — the adhesion must be torn away by the needle but this requires nicety. Take care not to thrust the iris into folds or it may be torn —

Sometimes before the operation we know that the capsule is opaque. We know this by spots of opacity appearing as tho' detached from the lens. In this case after the section of the cornea as it is known the capsule must be extracted Dr Radius the anterior part of the capsule to be pinched up with a pair of forceps; by pulling the whole membrane it may easily be taken out. The capsule is thus extracted first because it can be more readily laid hold of while the lens remains in the eye. The lens when divested of its capsule falls to the bottom of the eye — it may be extracted with a small hook

Sometime peculiar circumstances render
Couching preferable to Extracting —

The instruments employed in performing
this operation are

1st A speculum oculi

2? A needle — These are of various
forms. Mr. Pott advises a sharp pointed
needle but this being broader near the
point than it is at a greater distance from
it allows the agent and humane to pass out.

Mr Hey uses one which is quite round
and Professor Scarpa advises it to be a little
bent — That which Dr P. uses is round
and a little bent or curved. The point shd
be extremely sharp that it may enter the
sclerotica easily. It is however very difficult
to get it so sharp — Dr P. therefore punctures the
sclerotica with the knife — This produces a
simple incised wound which is much more
easily healed up than that made by the needle
which must produce a punctured and
somewhat lacerated wound — Dr P. has found
that much less inflammation followed the
operation when the knife was used than when
it was not —

The operation —

Fix the eye by means of a speculum and when it is perfectly steady puncture it about the sixth part of an inch behind the cornea — Then introduce a needle and push it on between the iris and the chrystaline lens: then push the lens a little backwards depress the point of the needle and elevate its handle thus pushing the lens and its capsule to the bottom of the eye — Then bind up the eye and put the patient into a dark room keeping to a low diet. There is no necessity for his going to bed —

Blindness sometimes take place from a closure of the pupil: sometimes from an opacity of the central part of the cornea before the pupil. When the iris is closed and we have reason to believe that the retina is unimpaired a portion of the iris may be removed so as to admit the light. .

The patient should sit as in the operation of extracting and the Surgeon should sit before him. Commence the incision of the cornea in the same manner as when extracting and when the point of the knife gets opposite to where the pupil is to be made push it backwards

push it backwards and make a semicircular section of the Iris — This being done the semicircular part of the iris may be cut off with a pair of scissors of the usual form or with a pair which are curved at the point.

One quarter of the circle may be cut on one side and the remaining quarter on the other side — or we may have a pair of forceps like those mentioned before but with a round sharp circle of steel like the end of a hook on one side and a silver button on the other —

With this the remaining semicircle may be cut after making the first incision and thus a new circular pupil will be formed.

It is difficult to open these instruments sufficiently after they have been introduced into the eye — but it may nevertheless be done.

When the central part of the cornea only is opaque the object is to cut out a portion of the iris opposite to the transparent part of the cornea. In order to do this puncture the eye with a knife in the same manner as when extracting the lens. after finishing half the incision the knife is to be drawn back a little, a portion of the aqueous humour rushes out, the iris is pressed forward and entangled with the point of the knife

with the point of the knife. The incision is then to be continued – a portion of the Iris will be cut off and the patient will immediately recover his sight. ——

Of those diseases in which Respiration and Deglutition are affected and in which Oesophagotomy or Laryngotomy are necessary ——

It sometimes becomes necessary to open the windpipe in order to open the windpipe in order to open a passage for air into the lungs &c

Surgeons formerly cut into the trachea for this purpose but at present it is customary to introduce an elastic catheter . . . Many cases render this necessary — as the inflammatory complaint so common in our climate, tumors pressing on the trachea, foreign substances getting into the trachea &c — Sometime the tongue is so swollen as to ~~obstruct~~ impede deglutition ——

In deep wounds of the throat which divide the trachea and oesophagus it was formerly thought necessary to perform these operations, but now it is found quite sufficient to introduce a flexible catheter

after the manner of Desault ——
The same observation holds good in
cases of Suspended animation ——

The introduction of foreign substances
causes violent coughing &c and
therefore it might be supposed that it
would be improper to put in a catheter.
Experience however teaches us that
it does no harm; after the first irritation
is over it remains in without inconvenience.
Where the tumour is in the mouth and
the larynx is sound a catheter should
be passed into the larynx. ——

A young man having swallowed
his money in a bag in order to avoid being
robbed, it stopped in the pharynx
and pressed upon the larynx in such
a manner as to impede respiration
~~violently~~ exceedingly. Here the Surgeon
performed an operation in order to extract
the money. In this case a catheter
might have been introduced into the
larynx and while it remained there the
bag of money should have been extracted
by means of a pair of Forceps
as it might have been pushed
back

1½ a 75/37½

pushed back into the stomach where it would have produced little or no inconvenience —

The advantages attending the introduction of the catheter in these cases are various. It does not subject the patient to the pain of an operation nor to the inconvenience of the subsequent cure —

When the operation is performed blood sometimes get into the lungs and there causes great irritation sometimes even stopping respiration entirely . . .

With respect to the time that a catheter may remain in these passages we may be satisfied by the following case —

A French Soldier at Lyons attempted to commit suicide and in so doing divided the trachea and oesophagus without injuring the carotids . . . A flexible catheter remained in each of them during the whole time of the cure which was 6 or 8 weeks —

Sometimes however an operation is necessary

is necessary. When foreign substances in the trachea cannot be coughed up they sometimes get into the ventricles of the glottis. In this situation they produce perhaps less inconvenience than in any other part of the windpipe but only very small bodies can be lodged there.

When a substance gets into the trachea and cannot be rejected it is necessary if the patient be not dead immediately to operate. It is sometimes doubtful whether the substance be in the trachea or oesophagus. Then by passing a catheter into the oesophagus we may very easily distinguish as it is very easy to tell whether the catheter be in the larynx or oesophagus. If it be in the latter it gives little inconvenience to the patient. but if in the former there is a spasmodic elevation of the larynx the flame of a candle will be blown by holding it before the end of the catheter; the patient will be inclined to cough and by introducing a little liquor it will pass into the stomach

into the stomach very easily if the catheter be in the oesophagus but if in the trachea it will be immediately coughed up.

When the catheter is introduced into the glottis it should be tied to the patients night cap; it has been advised to cover it with a piece of gauze to keep out any particles of dust that may be floating in the atmosphere

There are two places in which tracheotomy may be performed viz at the lower part of the Larynx and in the trachea. The latter may be divided longitudinally without danger but the French surgeons prefer the former there being only Skin in between the Larynx & the external surface while between the trachea and the Surface there is the Skin and also the thyroid gland.

Laryngotomy is therefore preferable to Tracheotomy

The operation

The operation of Laryngotomy

The surgeon should sit upon a chair before the patient. He should feel for the space intervening between the thyroid and cricoid cartilages and directly over this part make an incision of about an inch in length extending from the former to the latter of those cartilages. This is to be made in the direction of ~~the cartilages~~ the trachea and to penetrate through the skin

Wait until the hemorrhage has stopped and then make a transverse incision between these two cartilages taking care to cut nearer the cricoid as a small artery sometimes passes across at the bottom of the thyroid. If however this should be divided it may be taken up.

A silver tube is to be inserted into the orifice which should be two or three times a day taken out and cleansed. Its orifice should be covered with a piece of gauze. If a foreign substance is to be extracted the orifice in the larynx may be dilated if necessary

or a forceps may be introduced through the orifice to extract it —

The cricoid cartilage may if circumstances require it be divided from top to bottom as it is found that large wounds of this part heal as kindly as small ones. This operation is seldom necessary but where the obstruction is of a spasmodic nature —

Dr D. would prefer it to irritating the glottis by endeavouring to pass a bougie the consequence of which may be fatal — when the oesophagus is obstructed the consequences are equally fatal though not so immediate —

obstructions of the oesophagus may be produced by large and schirrous tonsils, tumours on the neck, enlargement of the tongue &c &c —

In these cases there are two modes of supporting the patient viz — by nutritive glysters & nutritious substances introduced into the stomach. The former alone are not sufficient.

In order to introduce nutritious substances into the stomach the operator passes a small scal skin and injected fluids

fluids through it. Mr Desault's instrument
i.e a flexible catheter is however the
best method. This must be passed
into the nose into the oesophagus
If there should be any difficulty
in introducing it the finger or a double
canula may be used to direct it —
A Syringe of rich soup may be injected
into it Mr Desault recom-
-mends this plan in all swellings of the
throat as in Quinsy &c —

— Structures of the Oesophagus —

This being a muscular canal is sometimes
affected Spasmodically and sometimes
with permanent structure — This must
be fatal unless soon relieved —
See Home's Dissection —
The Symptoms of a structure in the oesophagus
are at first difficulty of swallowing; afterwards
the patient can only take liquids into his
stomach and at length he can swallow
nothing the canal being obliterated —
I once saw a case in which the
canal was so obstructed that only a
small probe could be passed thro' it.

Mr Home advises in the commencement of the disease to use large wax bougies and gradually to increase their size and that the treatment shd. be the same as of stictures in urethra —

Sometimes caustic is applied — For this purpose a bougie without caustic is to be passed as far as the stricture. It shd. then be marked with the patient teeth in order to ascertain to what distance it went down &c

Then introduce the bougie armed with caustic and let it remain there 1/2 — This may be repeated every day until the cure be effected —

It is sometimes necessary to extract foreign substances from the oesophagus.

A boy in eating a peach after taking off the fleshy part of the fruit swallowed the stone — This stuck fast 3 or 4 inches down the oesophagus being stopped by a spasm —

A man who attended the lecture room at London and who frequently swallowed half crowns in attempting to do it one day failed and the coin was stopped by

was stopped by a Spatula — None of
the Surgeons in London could extract
it and the man at length died —
We generally in the first place introduce
a probang or a large bougie —
Dr P. has often succeeded in relieving
the Spatula and dislodging the substance
by means of this gargle — Sca grains of
Tartar Emetic dissolved in 12 tablespoonfuls
of water. The patient shd. gargle
his throat with this and if possible
swallow some of it — This will
remove the Spatula as soon as nausea
is produced — Sometimes it is a sharp
body such as a needle a pin or
a fish bone that sticks in the
tonsils — It should then be extracted
with a pair of forceps. — If it can
be felt but not seen introduce
a pair of curved forceps and extract
it — If however it sticks so far
down that it cannot be felt the patient
should not despair. It will at length
be loosened by suppuration and fall
out — The idea that sharp pointed
bodies, will wound the stomach or
intestines need not produce any alarm.

Dr. P. has never known this effect produced by even the sharpest bodies —

Of Polypi

These commence with pain in the back. Small tumours then appear upon the of a spongiosa or other parts of the nostrils. These increase and form an obstruction to breathing — They are affected by the weather being swollen in warm and damp weather and contracted when it is dry and cold. At length the tumour prevents the passage of air through the nostril and assumes the shape of the particles of that passage. It becomes visible in the anterior part of the nostril and also behind — Great inconvenience is experienced from it — The Eyes are suffused with tears from an obstruction of the nasal duct —

Sometimes there is no pain — The Eustachian tube being closed the hearing is affected — The shape of the face becomes changed from one nostril being swollen —

The tumour ulcerates, the bone —

bone becomes carious and ends in
fatal caries — the teeth fall out and
a fungus shoots out from the sockets —
The causes of polypus are not known
But they are said to be picking or
blowing the nose — This however
will not produce them —
There are it is said, 2 kinds of them
viz Mild and Malignant but this
division is incorrect for they are
all mild at first and before they
ulcerate —
There are 3 methods of extracting
Polypus from the nose
1st Cutting them off — 2d Pulling them
out — 3d Passing a wire round
the root of them in such a manner
as to destroy the circulation and
thus cause the death of the polypus
and its separation by the absorbents —
They generally originate from the
superior turbinated bone and
sometimes extend backwards so
that they may be seen posteriorly.
But even

But even if it do not it is in the power of the Surgeon to catch hold of the polypus and pull it out —

Dr P. prefers this method because it tears away the root of the diseased and sometimes even brings with it a portion of the turbinated bone and thus prevents the polypus from being reproduced —

The hæmorrhage which sometimes succeeds the excision of polypus has induced Surgeons to prefer extraction by the forceps — The hæmorrhage after this operation is considerable but not alarming — Dr P. has never known it produce bad effects —

The most expeditious mode of removing polypus is by cutting it off and when it is attached by a narrow base this method answers very well. But when the base is large it is not so eligible: many incisions are then necessary, the first of them brings blood and the patient cannot keep his mouth open

open long as the blood falls into the
glottis and occasions coughing.
The next method is by tying a ligature
round the base. The polypus then looses
its life and seperates in a few days.
The time in which this takes place
varies from 3 to 12 days during
which time it is necessary to wear
the cannula. In order to tye on the
wire we employ a Double cannula
and a flexible silver wire passing
through it. These are introduced
into the nostril and by means of a
forked director pulled as tight as
possible round the base of the polypus.
It will come off in a few days
but from the inconvenience of wearing
the cannula until this takes place
Dr P. has after it has remained 2
or 3 days pulled away the polypus
which may then be easily done
when the attachment is very broad
neither the first nor the last of these
methods is feasible but the tumour
must be

must be cut off with a curved blunt pointed bistoury. after this it is necessary to stuff the nostril with lint to prevent the polypus from returning — If however it should still grow again it may be cut off as fast as it reappears or else

Hernia

Hernia may be defined a tumour occasioned by a protrusion of some of the contents of the abdomen. This takes place at different parts of the body, but most frequently at the groin owing to the parietes of the body being weaker at that part. When the tumour is formed at the navel it is called umbilical hernia when in the groin Bubonocele and in the thigh Femoral Hernia. In every hernia the protruded parts are inclosed in a sack which is formed by an elongation of the peritoneum. There is one species of hernia called congenital hernia or Hernia Congenita which is well worthy of attention when the bowel is in contact with the testicle.

The tunica vaginalis which is probably a

property a peritoneal covering of the testis passes with it in its descent into the scrotum — The upper part of this sack generally closes up around the Spermatic cord immediately after the descent of the testicle —

It sometime happens that this opening does not close immediately but remains open for some time — In this case hernia may be produced by coughing sneezing &c &c

Bubonocele

The symptoms are swelling in the groin beginning at the abdominal ring and passing into the scrotum and labia pudendi. The testicle can be felt at the bottom of the scrotum.

The tumour is soft, bears handling well and when the patient lies down disappears — Pressure on the abdomen makes it more tense and if the surgeon lay his hand on it while the patient coughs

Surgeon lay his hand on it while the patient coughs he will a pressure made against his hand causing a sensation as if it were blown into ——

There are some diseases with which hernia may be confounded as bubo swelled testicle, lumbar abscess and hydrocele but by paying attention to circumstances it is easy to distinguish between them.

A bubo is generally preceded by a chancre, is hard and painful and the tumour does not disappear on lying down. It is likewise easy to distinguish between bubonocele and swelled testicle or hydrocele.

The testicle is hard and painful to the touch, is only found at the bottom of the scrotum and the spermatic cord can be traced to the abdominal ring at which place it is free from swelling. In hydrocele the tumour begins at the bottom of the scrotum and works upwards whereas Hernia

whereas Hernia begins to swell at the top or groine and works downward.

The fluctuation may be felt in Hydrocele. In swelled testicle or in Hydrocele we cannot reduced the tumour by squeezing it — But Hydrocele is sometimes more difficult to be known

It is sometime inclosed in a cist which when the patient strains hard is protruded — Hydrocele is generally diaphonous — A case came under my notice which was supposed to be hernia and as such was tapped —

I was convinced upon examining it that it was Hydrocele —

It was diaphonous — It was cured by tapping and afterward injecting wine —

In the lumber abscess the matter passes from its seat in the psoas muscle down under Poupart's ligament following the course of the muscle and forms a tumour on the upper and anterior part of the thigh at which place the fluctuation can be felt

the fluctuation can be felt — and the tumour may be pushed from the thigh up into the cavity of the abdomen and vice versa according as pressure is made on each — If your hand be laid on the abdomen and pressure made, the tumour on the upper part of the thigh will be rendered more full and tense. The great danger liable to take place in hernia is from the great inflammation which arises from the stoppage of the circulation and of the faeces in consequence of the stricture coming on —

This stricture may be formed either by the neck of the sack or by the tendon of the external oblique muscles. When the existence of hernia is ascertained it ought to be reduced and supported by the application of a truss. Not unfrequently the patient can reduce it himself — but when he cannot the Surgeon by placing him in a horizontal posture can generally effect it after which a truss should be

a truss should be applied directly over the orifice. The truss is very generally applied immediately over the pubis so as to press the Spermatic cord giving great uneasiness to the patient if continued any length of time. The best way is to examine exactly with your finger tracing the tumour into the abdomen and when you find the orifice apply the truss just above the upper edge of the os pubis.

Trusses are usually employed only for a particular age but they should be employed when necessary at all ages in

Rupture sometime prevent the Reduction of the protruded parts, but we cannot always reduce them even when there is no Strictur and for several reasons

1st Because too large a quantity of bowels have collected in the tumour to allow of it being returned. 2d The next difficulty in the Reduction of a part is from

3d From adhesions taking place between the protruded

the protruded parts and the sides of the opening or form adhesion of the protruded parts within themselves —

when the difficulty of reduction arises from adhesions as in the last case it will admit of no other remedy than the support of a truss when there has been no adhesion D.P. has succeeded by confining the patient to a horizontal position low diet, bleeding cathartics &c and then applied a truss —

when adhesions render the reduction of the tumour impracticable, a sac made just so as to contain it ought to be applied otherwise the hernia will continue to increase till it gets to a great size. I saw one in which the lower part of the sac reached down to the knee. If the patient when in such a situation neglects the truss he is not only in great distress but in great danger of strangulation.

The Symptoms of it are an increase of hardness

in the tumour, obstinate costiveness, pain if the patient stand up, hard contracted, tense pulse and sometimes vomiting and the tumour becomes painful to the touch. A case of Strangulated hernia requires immediate care and attention. In proceeding to return the protruded part, the patient should be placed in that situation which will throw the contents of the tumour towards the abdomen. He should be laid on a firm bed or matrass with his buttocks raised considerably higher and the thigh bent so as to relax the muscles, when this is done squeeze the protruded parts cautiously with your hands.

This operation is called taxis. If this be not sufficient bleeding very copiously will frequently be of use and Mr Pott cautions it till a deliquium ensues. Dr P. hamm has not seen one case where the reduction immediately succeeded V.S. and deliquium animi.

Cathartics are also useful. Jalap

Jalap Crem. Tartar with oil of mint answers very well —

Along with this the warm bath shd. be used. - The patient should be kept in the bath till he becomes very weak. Dr P. has a very favourable opinion of the use of the warm bath in hernia — it produces a general relaxation of the muscular system —

When all these remedies fail injections made by pouring a pint of boiling water upon ℥i of tobacco are sometimes very efficacious a

The fumes of tobacco are not so convenient as they require a particular apparatus and they sometimes excite spasms —

The application of ice has sometimes proved useful — this remedy is particularly recommended by Mr Wilmer — It shd. be continued three or four hours —

If all these remedies fail we must have recourse to an operation for if the patient be not relieved by some means he soon grows worse:

The Sickness

the sickness becomes more distressing, the pain is more intense, the belly swells, the fever runs high, hiccough cold sweats to ensue, but after a while these symptoms cease and the patient thinks himself getting better, and in some instances the contents of the tumour voluntarily go up but the symptoms soon return worse than before and death quickly closes the scene from mortification of the intestine coming on. It is difficult to tell when is the exact time for performing the operation, because sometimes the pressure produces mortification of the bowels in a very short time and at other times the patient will bear it for three four or five days and then get well.

But in general Dr. P. would advise if the above remedies fail to perform it in at most 36 hours after its commencement if the symptoms of Strangulation remain. Dr. P. once succeeded in reducing the tumour after all other remedies failed by raising the foot of the bed considerably higher than the head. In this case the tumour receded in the course of the night.

There are two methods of operating

There are two methods of operating for Hernia.

The first precaution is to shave away the hair, then make an incision in the direction of Poupart's ligament of about four inches in length and dissect the upper part laying the tendon of the external oblique muscle bare so as to expose the ring —

This done puncture the tendon in the direction of the fibres about an inch above the ring — A director should then be introduced at the puncture and passed out at the abdominal ring. The part of the tendon lying over the director is divided in a direction parallel with its fibres. An attempt is now made to reduce the contents by taxis —

This practice has been disadvised of by some surgeons who say that the content of the sac may be in such a state as to forbid reduction and that the sac shd. be opened in order to examine its contents; for say they if any of the parts be killed or if the sac contain acid serum and it be returned in that state into the abdomen it will occasion

occasion great inflammation. But I would ask these surgeons if they would not before the operation use every effort to reduce the hernia; and in the present case if it can be reduced it will prevent the necessity of opening the sac by which the risk of peritoneal inflammation will be obviated or avoided — Opening the sac would produce a communication for the air with the cavity of the abdomen and all such communications are attended with violent inflammation which mostly terminate fatally on the third day or sooner —

— Should the attempt to reduce the protruded parts in the sac be ineffectual the operation must be continued —

The incision is continued in the direction of the tumour to the bottom of the scrotum and the sac is laid bare — after this attempts to scratch through the sac should be repeatedly made with the point of a scalpel, trying with a probe after each scratch to see if a puncture be not made.

When a puncture is made introduce a director and with a blunt pointed bistoury enlarge the orifice so as to introduce

introduce the finger which is the best director for the knife. The sac should now be divided through its whole extent.

Next examine the contents of the sac which if sound should be returned into the cavity of the abdomen. This at times cannot be done for three reasons.

1st Adhesions. 2d a change in some of the protruded parts or 3d. Stricture in the neck of the sac alone.

When this cannot be done on account of a stricture in the mouth of the sac the stricture is then to be divided taking care not to wound the intestines. The finger should be introduced as far as possible in order to direct the knife. Sometimes adhesions take place so that the intestines cannot return when the sac is laid open; these may be easily seperated either with the finger or with the handle of a scalpel. If the protruded part be altered in shape the ring should be dilated in order to admit of its return except it be formed by omentum then the altered part may be cut off.

If mortification of the protruded part take places it ought to be seperated and the sound part of the intestine joined by the interrupted suture and sewed fast to the side of the wound — altho the faces will for some time be evacuated at the seam the wound in general heals well

Altho in bubonocele it is best not to open the sac if it can be avoided yet in Femoral Hernia Dr. P. thinks it most safe to open the hernial sac and then divide the stricture — The sac here is extremely thin and scarcely to be seen.

In performing this operation great caution is requisite to prevent wounding the intestine. When cutting near the neck of the sac we should be careful not to bear to either side because on the outside of the neck of the hernial sac lays the Epigastric artery and on the inside of it the Spermatic ~~artery~~ cord crossing each other directly over the stricture — just so that if you cut towards the inside you will wound the Spermatic cord and if on the outside the Spermatic artery and if posteriorly the great bleeding

the great bloodvessels will be endangered.
To remedy this Mr Gimbernat proposed to dilate
the stricture by making the incision towards
the pubis. His method is after opening
the sac to introduce a director or the
finger along with a bistoury having its
edge towards the pubis. When you come
to the stricture the incision is to be made
toward the pubis dividing the stricture
so as to cut behind the spermatic cord.

Dr Munro advises to cut from the
neck of the sac toward the navel so that
by keeping that direction you might dilate
the stricture toward the angle formed
by the epigastric artery and spermatic
cord and thereby avoid cutting either.

Mr Hey supposes that the femoral
ligament forms the chief obstruction to the
reduction of the protruded parts.
Read Pott, Hey and Cooper.

Sometimes the stricture cannot be reduced
on account of the smallness of the aperture.
When this happens introduce a director
under the stricture and then with a bistoury
lay it open sufficiently to reduce the protruded
parts. If the protruded part of the intestine
be found

be found in a gangrenous state that part must be removed taking care to cut through a sound part so that the dead portion may be completely seperated and the sound part stitched to the side of the wound. The intestines should protrude about an inch. The protruded part will in time as the wound heals withdraw themselves within the abdomen.

As they are drawn in the edges will come nearer into contact till at length they will unite and form a perfect canal completely within the cavity of the abdomen and the patient will discharge his faeces the natural way.

Sometimes the omentum is found in a state of ulceration; it should never be returned so within the cavity of the abdomen or else the dead portion will cause peritoneal inflammation. The fold must be spread out to extricate the intestines and the mortified part may be cut out with a pair of scissars.

If an artery is wounded or divided it may be taken up leaving the ligature in the wound

long to reach out of the abdomen on

Mr Hey has proposed taking off the dead portion by means of a ligature tying it so tight as only to indent the omentum at first and then daily tightens it till at length it is completely separated.

And when the gangrenous part of the omentum is protruded down through the abdominal ring Mr Hey's method is a very good one.

Hydrocele

Hydrocele is a term applied to a preternatural collection of water in the Scrotum.

of this diseased there are three Species. The first is an effusion of water into the cellular substance of the Scrotum

The second Species is when the water is contained in a cist or cists on the Spermatic cord or on the body of the testis

The first which is an anasarcous tumour is a Symptom of general dropsy and is easily distinguished from hydrocele of the tunica vaginalis

It is of a smooth equal surface and is diffused equally all over the Scrotum.

The tumour has a doughy feel indentations may be made by pressure with the finger, the Skin is nearly of its natural colour and diaphanous

If the patient lie down no diminution of bulk takes place in the tumour

The swelling begins at the bottom of the Scrotum

begins at the bottom of the scrotum.

The testicle can be easily felt at the commencement of the disease. The spermatic cord can also be felt but there is no perceptible fluctuation.

The second kind is Hydrocele of the tunica vaginalis. This is owing either to an increased action of the exhalent vessels or to a decreased action of the absorbents.

~~The swelling in this species begins at the bottom of the scrotum. The testicle can be easily felt at the beginning of the disease.~~

The swelling in this species begins at the bottom of the scrotum & is at first but gradually grows more tense and cannot be reduced by pressure.

Sometimes the water is thrown suddenly from a ruptured lymphatic.

At first the tumour is small and the testis can be easily felt but when the tumour is large the testis is not perceptible. The fluctuation is evident

is evident and the tumour is diaphanous.
The disease most likely to be confounded
with it is Hernia. It is however easily
distinguished from hernia as in the
former the tumour begins at the bottom
of the scrotum and extends upwards,
but in the latter it begins above and
extends downward — Hydrocele is
also permanent whereas hernia dis-
-appears when the patient lies down —
Schirrus of the testicle has sometimes
been confounded with it — We can
distinguish between hydrocele and a schirrus
of the testicle by the latter having a hard
swelled Spermatic cord — In schirrus
the tumour is flattened and is heavier
than hydrocele. It is scarcely possible
to confound it with hernia humoralis —
This kind of hydrocele is however sometimes
very complicated so as to require much
attention to distinguish between it and
other diseases — The third species is
when the water is contained in one or
more cysts of the Spermatic cords —
Here the testicle can be felt at
the bottom

bottom of the scrotum. The tumour is diaphanous and swells up towards the abdominal ring and in one case Dr. P. thinks the tumour extended through the ring. In such cases there is much difficulty — if we press the tumour so that the water is forced within the abdomen, the instant we take away the pressure it will return again — Having mentioned the different species we next proceed to the

Treatment

No inconvenience results to the patient from hydrocele except from the weight and bulk of the tumour, although in hot weather the skin sometimes is excoriated. When the patient walks about the weight of the tumour produces pain in the back. This is relieved by the use of a suspensory bandage, which is so easy and is worn with so little inconvenience that some patients refuse to submit to an operation.

The first species which is that of anasarcous hydrocele is generally cured by

is generally cured by meant of medical aid and not by any operation ——

It sometimes happens however that an operation for the discharge of the fluid is necessary for the cure ——

This shd be done by making small punctures with the lancet through the skin so that the water may ooze out ——

This is preferable to making an opening with caustic or to the introduction of a seton or to making a deep incision which may produce mortification ——

The punctures are to be covered with dry lint. They should be made in some or five places ——

Sometimes an anasarcous tumour is produced by the bursting of the tunica vaginalis ~~x~~ A case came under Dr Physicks notice of a gentleman who while sitting still felt something snap in his scrotum. Shortly after a tumour appeared which was soft and diffused itself generally all over his scrotum. The skin became black which very much alarmed the patient as he supposed mortification was coming on ——

Three Physicians were called in who not understanding the nature of the case were doubtful that the patients apprehentions were too well founded — Mr Hunter supposed that the tunica vaginalis was ruptured and that the scrotum was owing to the escape of blood — The patient was informed that in time the blood would be absorbed and the tunica vaginalis heal but that he would be subject to a return of the complaint. All these predictions were verified —

Hydrocele of the Tunica Vaginalis

Dr Else mentions a case of hydrocele of the tunica vaginalis which was cured by purging — Dr P. has cured one by causing cold water to be poured on it from the spout of a kettle twice or thrice a day —

This method will often succeed in children. Sometimes the effused fluid is absorbed without any aid. When all these fail it is necessary to have recourse to an operation. Relief may commonly be obtained by evacuating the water. This is done by means of a common trocar or by an instrument called a trocar — The trocar is to be pushed through the

through the scrotum into the cavity of the hydrocele; when introduced the stilette is withdrawn to suffer the water to run off —

After that is done the wound is dressed by applying a strip of adhesive plaister and the part supported by a suspensory bandage. This is only palliative and is not sufficient to cure the disease completely — But to produce a radical cure it is necessary that something more should be done — There are several modes of effecting a radical cure of which I shall now mention only 4 —

The object of them all is to effect an union or adhesion between the tunica vaginalis and the testis. The most ancient of these is to make a long incision through the scrotum so as to examine the state of the testicle. when it is ascertained to be free from schirrus lint is placed in the cavity between the tunica vaginalis and the body of the testis. The lint is to be left in till suppuration takes place freely. It is then to be extracted. The tunica vaginalis is soon after united to the testis by granulations —

This mode frequently succeeds but it causes great pain and inflammation and it not unfrequently happens that abscesses

that abscesses are formed after the patient is thought to be well. Dr P. had seen abscesses formed in the scrotum in consequence of some portion of thread being left behind six weeks after the wound had healed up.

The next method is by means of an eschar formed by caustic.

This is not only attended with great pain and inflammation but causes a large suppurating sore to the no small distress of the patient.

The next method is to pass a seton through the scrotum between the tunica vaginalis and the testis. This method is recommended by Mr Pott. But it is exceptionable because sometimes the adhesions will take place only at the junction of the seton with the tunica vaginalis and then the disease may again occur. And likewise when there are cysts on the body of the testicle, this treatment will not do and these cannot be opened without laying open the tunica vaginalis.

Mr. Earle has revived the method of throwing stimulating injections into the scrotum

into the scrotum — He uses wine diluted with one third water — Some advise a solution of white vitriol — it would answer very well — Others have recommended a solution of corrosive sublimate — if this be used it should be very weak — —

After the water has been drawn off an injection of wine and water may be thrown into the tunica vaginalis; this will sometimes cause a good deal of pain acc of the lumbar region and has produced syncope

It should soon be let out — perhaps after three or four minutes — Inflammation will come on in three or four days but never runs very high and soon subsides without any trouble —

Frequently on the cessation of the inflammation the water again returns —

In all the cases of that sort Dr P. has effected a cure by pouring cold water over the part to about the quantity of half a gallon a day — When the first operation fails it is not so severe but that the patient will submit to it a second time — when one or two injections will not cure Dr Hunter proposes to make an incision of about an inch long

in the anterior and upper part of the scrotum so that the finger may be introduced to ascertain if there be any hydatids within and fill the space between the tunica vaginalis and testis with flour or a small bolus of dough to cause an equable suppuration over the whole cavity. The contraction of the scrotum which takes place will throw out the dough gradually and as it is removed or evacuated the sides are brought into contact regularly, adhesion takes place and the cure is completed.

I have performed this operation several times and believe it to be the best mode of curing the complaint.

The Instruments necessary in performing the operation of injection are

A silver canula about three inches long with a small handle to the end of it. In this tube is a Stilette projecting about 1/80 of an inch beyond its end. A cock with a bladder or Gum elastic bag fixed to the end of it for containing the injection.

When the water is drawn off an injection of port wine is thrown in, retained a short time and then suffered to run out.

The wound

The wound is closed with adhesive plaister, the scrotum is suspended and the patient put to bed ——

Care should be taken to keep the canula through the tunica vaginalis when you inject or else the whole of the contents will be thrown into the cellular substance without effecting its way into the proper place ——

Care should also be taken to examine well the place where you puncture the scrotum to avoid wounding the testicle which too often happens ——

The anterior and inferior part of the tunica is in general the proper place for puncture ——

A gentleman troubled with hydrocele called a Surgeon to his aid who performed the usual operation with the trocher; but to his great astonishment no water flowed out on his withdrawing the Stilette ——

Another Surgeon was called who likewise performed the operation nearly in the same place but with the same success — A third Surgeon was called but met with the same

disappointment at the others—

Mr Hunter and was then requested who upon examining the cake and recollecting the peculiar sensation which the testis gave when squeezed, he questioned the patient while making pressure on different parts of the tumour and determined in this manner that the testis was attached to the anterior part of the tunica vaginalis just where the puncture had been made. The trocar had been pushed into the body of the testis — He then pierced the scrotum at the lower and back part of the tumour where the testis usually lies and the water flowed out as in common cases.

Lythotomy

Calculous concretions are found in different parts of the body. I have found one of the size of a common pea situated at the base of the tongue. They are found in the salivary ducts, in the lungs uterus &c but they are most commonly found in the organs of urine. The incrustation found deposited on the sides of the vessels which hold urine prove that the calculous substance it contains may readily form a stone. The quantity of calculous matter varies in different persons and it is greater at one time than at another in the urine of the same person. It is not my intention to enquire into the circumstances which dispose the body to the formation of stone, it is sufficient for my purpose to know that it can be formed by a deposition from the urine — Calculous concretions sometimes are formed on catheters which have remained a few days only in the bladder —

The different substances which have been found in the centre of calculi prove sufficiently that any solid body remaining in the body may become a nucleus for a stone.

The stone is not always of one uniform consistence

but is composed of several lamina a some of which are hard and some are soft.

They are likewise of different colours — some nearly white others a dark brown —

The reason of this difference has never been satisfactorily accounted for. Stone is not exclusively found in the bladder, it is frequently found in the kidneys and prostrate gland.

I believe it most frequently originates in the kidneys and is washed down the ureter into the bladder, but this is not always the case — when in the kidneys it causes pain and uneasy sensations in the small of the back — A case of this kind was cured by riding on horseback from Germantown to Philadelphia but the patient was on the same day affected with symptoms of stone in the bladder. When stones are formed in the kidneys the symptoms are different from those which accompany stone in the bladder. Mr Bloomfield has described the symptoms so accurately that I shall give them in his own words —

When stones exist in the bladder they occasion a distention of that viscus by preventing the discharge of urine, but when in the kidney they prevent the urine from flowing into the bladder. The stone frequently lodges in the ureter

in the ureter in its passage from the kidney to the bladder occasioning a great accumulation of urine and distention of the ureter above the lodgment of the stone, till the column of urine be so great as to force it down into the bladder. This causes a good deal of pain but when it is washed down the ureter into the bladder the patient is then much easier. The Stone is sometimes lodged between the coats of the bladder producing great pain. When the patient complains of pain and burning in the bladder we have then reason to believe that the stone has found its way into that viscus.

The patient should drink freely of barley water and endeavour to pass the stone by urine. He should attempt this frequently by retaining his urine as long as he can and then voiding it in a full stream. If this do not succeed the pain becomes greater. The pain is most severe after the patient has voided his urine. When a stone exists in the bladder the patient feels an itching sensation in the glans penis accompanied with pain and heat in the bladder at the place where the stone is lodged. The stream of urine is sometimes suddenly

is sometimes suddenly stopped causing great pain by the fall of the stone on the orifice of the urethra and at other times flows in a full stream. An uneasy sensation is felt all along the urethra from the perinæum to the glans penis, as if something were lodged in the ~~rectum~~ passage. The patient is disposed to pull and squeeze the penis and prepuce. Sometimes it is attended with tenesmus and prolapsus ani. The urine is pale and often mixed with blood; the digestion is interrupted occasioning flatulency, costiveness weakness &c. Fever supervenes and if the stone be not extracted death soon takes place.

All the above symptoms however do not prove it unequivocally as they sometimes occur from other causes as inflammation and ulceration of the neck of the bladder or ulcers or tumours in the rectum. A case of a young woman came under my care with the symptoms above described She was sounded three times but without finding any stone. after which mercury was prescribed and the patient

soon

soon got well. In this case I suspect there was an ulcer of the neck of the bladder. Hemorrhoidal tumours not unfrequently cause these symptoms. Sometime the stone is encysted and the patient experiences no pain because when he moves about the stone is kept from falling on the neck of the bladder. when the patient discharges frequently small pieces of calculous matter he may be certain of the existence of stone. Mostly the stone can be felt by sounding which is the best way to determine its existence ——

Though the attempt of the Surgeon to feel the stone may sometimes be frustrated by its situation behind and below the neck of the bladder Yet if the Surgeon introduce his finger into the rectum and press the neck of the bladder upward he will immediately be able to feel the stone. Many remedies have been employed in the cure of stone but they generally do no good ——

Strong alkaline ~~substances~~ solutions have been found to dissolve the stone when out of the body and their use has been

has been adopted to be taken internally for the cure of stone — The most usual remedies taken into the stomach are aqua mephitica alkalina, Lime water, Uva Ursi &c — It has been likewise advised to inject certain solvents into the bladder.

One great objection to medicines taken as a solvent is that they may excoriate the coats of the bladder to slough off and thereby endanger the life of the patient.

The carbonate of potash has been serviceable in some cases. Lime water sometimes useful in relieving the pain and uva ursi has been given with that view. V.S. and opiates are the best remedies for a fit of the stone —

After all these remedies have failed we must have recourse to the operation of lithotomy —

Before proceeding to the operation in cold weather we should dip the sound in warm water to prevent contraction of the parts — The patient should be laid on a table or some convenient place — The surgeon should then proceed to introduce the sound with the concave

with the concave part turned toward the bladder. If not easily introduced in this manner turn the convex side toward the bladder and try again.

Frequently the sound will hang till it comes to the membranous part of the urethra and then suddenly stops. No force should be used to gain an entrance lest the sound be forced through the urethra — To avoid the fold in the urethra which stops the sound, the instrument is to be turned with the convex side up and introduced till it comes to the membranous part of the urethra; it is then to be turned in such a manner as that it shall revolve exactly on its own axis and pushed into the bladder.

Some Surgeons turn the concave side of the sound towards the bladder and persist in that way for its introduction while others as tenaciously sustain the opposite plan — This arises altogether from prejudice —

When the sound is introduced into the bladder turn it in all directions; if you do not feel the stone pass it ~~in all direction~~ further up the bladder; if it should not then be felt cause the patient to change his situation —

Frequently when the stone had eluded the sound, by placing the patient on his hands and knees it has been distinctly felt.

When its existence is fairly ascertained the operation may be performed —

Before the operation the patient should attend to his diet for about two weeks; and the day before the operation take a dose of castor oil to open his bowels; about an hour before the operation a glyster should be administered.

Some Surgeons advise to empty the bladder before the operation, but Dr. P. prefers having it moderately distended with urine which will render the operation more easy —

The instruments necessary for the operation are

A table — a common dining table will answer very well — whatever table is used it should be narrow so that the assistants can hold the patient without leaning on it — A blanket should be spread over the table and pillows applied to as supply the patient head — It will be necessary to be provided with warm water and sweet oil — Ligatures and tenaculum for taking up any vessel that may be cut —

5

Ligatures must be provided to tye the hands to the feet to prevent the patient kicking — worsted bindings answer very well —

A grooved staff. A scalpel, a sharp pointed bistoury. A gorget to divide the side of the neck of the bladder. The point of the gorget should play easily in the groove of the staff. This is of great consequence — The groove is to be clear of blood or unctuous matter and very smooth and clean. Forceps. There are of different shapes and sizes. I would prefer the smaller ones to those which have large ends for grasping the stone. If the small forceps are not strong enough for extracting the stone, a common scoop such as accoucheurs use for extracting the child's head may be introduced by the side of them and be made to assist in withdrawing the stone.

Sometimes the stone is not sufficiently firm to bear extraction but breaks into pieces. If any pieces are broken off it may readily be known by examining the part extracted.

A syringe has been found of advantage in cleansing the bladder of small pieces of stone by introducing it through the wound and injecting warm water into the bladder which will wash away any small pieces that may remain —

It is necessary that the edge of the Gorget should be very sharp at the beak else some force must be used to puncture the bladder, by which the Gorget may be driven too far and wound the fundus of the bladder. An accident of this kind happened to Mr Bloomfield.

The reason why this part of the instrument is generally dull is because the cutler cannot get at it to sharpen it on account of the beak. To remedy this inconvenience I have got some made so that the sides can be taken off leaving only the beak behind them. When taken off in this way they can be sharpened at the point as easily as any other part.

The sides are fastened on by means of a screw.

The old form of Gorgets used to be but one edged i.e. have but one edge for cutting, the other being blunt. but they are now used with two cutting edges so that both sides of the neck of the bladder may be divided.

The edge used also to run down the beak in a curved manner but I prefer them thought forming an acute angle in

Operation

After the staff is introduced the patient is directed to take hold of the side of his foot or ankle when the surgeon passes the ligature which was previously fixed to his wrist round the foot at the same time that an assistant secures the other foot — Two assistants stand by the side of the table, each takes one knee of the patient in his axilla and grasps the foot with his hands — Another assistant takes hold of the handle of the director and draws it to one side. The surgeon then holds away the scrotum from the perineum — in which he makes the incision from above downward between the anus and the tuberosity of the Ischium of the left side. Having cut through the skin and cellular substance, feel for the staff, then take a sharp pointed bistoury placing your finger at the sphincter ani to prevent cutting the rectum and cut towards your finger till you find the groove. Then rest the back of the bistoury on your finger and put the point in the groove of the staff

laying it bear. The surgeon then places the beak of the gorget in the groove of the staff, taking hold of the handle of the staff with his left hand and bringing it to a right angle with the body

The assistant then takes hold of the staff at the bottom and draws it up. The surgeon then bears down the handle of the gorget and pushes it into the bladder

The urine now escapes from the bladder. When the gorget has got into the bladder the staff is to be withdrawn. Before the gorget is withdrawn introduce the forceps, then take away the gorget drawing it carefully so as not to make a second incision. When you have taken hold of the stone introduce your finger by the side of the forceps to loosen any part that may be entangled and to place the stone in the best and easiest way for its escape from the bladder

When the stone is extracted examine if any more are left in the bladder or if any pieces are broken off the stone already taken out. If any be left they must be cut out the common means for securing them

The patient is now untied, his knees put close together and laid on his

side in bed

Not unfrequently as you are about to push the gorget in children they are seized with a straining fit; the Diaphragm and abdominal muscles press the viscera of the abdomen on the fundus of the bladder and force it on to the neck of the bladder. If you push in the gorget during this straining you will certainly cut the fundus of the bladder. If it come on after you have divided the neck and the urine evacuated it will be safest to withdraw the gorget

The operation of lythotomy is much easier in females. Some have advised to introduce the staff into the bladder and there with a bistoury make an opening into it from the vagina and extract the stone from the bladder through the vagina. Sometimes this mode of operating answers very well.

Dr P. has performed the operation

in this manner and the wound healed readily — He however prefers the forget —

Sometimes &c.

Doct. Hartshorn.

Philadelphia

Dr Hartshorn

Doctor Hartshorn